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Freshmen entering Hofstra University in the Fall of 1966 were assigned on a random basis either to the regular Freshman Seminar course, with emphasis on discussion, or to the Modes of Inquiry course, with emphasis on ways of learning and the development of critical thinking. The students responded to a 30-item questionnaire which was designed to assess their reactions to the particular course they had taken. The data obtained indicated that students in both courses would like discussion on a number of topics, and an emphasis on learning to think critically, although the relative emphases to be placed on these two points differed in each group of students. Those in the Freshman Seminar course felt that an ideal course would place more emphasis on discussion, and those in the Modes of Inquiry course perceived an ideal course as one that placed more emphasis on learning, thinking, and ways of knowing. Thus the students' perceptions of an ideal course tended to be similar to the one that they took. Although students in the Freshman Seminar class were most influenced by discussion, they also appreciated learning to think critically. It seems that students should be exposed equally to both courses, or given the right to choose to take either or both of them. (WM)

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HOFSTRA UNIVERSITY

Student Perceptions of the Freshman Modes of Inquiry Course (Fall, 1966)

Harold E. Yuker and Pauline Lichtenstein

Summary and Conclusions

In the present study, information was obtained from the students enrolled in the Modes of Inquiry courses. Their reactions to the course, their perceptions of an ideal course of this type, and the extent to which they perceived their behavior as having been changed by the course were obtained by means of a questionnaire. Student reactions to the Modes of Inquiry course were compared with the reactions of students to the Freshman Seminar course as reported in CSHE Report No. 66. The instruments and procedures used were all described in the previous report.

An analysis of the data obtained indicated that the Modes of Inquiry course was perceived as being different from the Freshman Seminar course. Modes of Inquiry was perceived as primarily emphasizing learning, thinking, and ways of knowing, and only secondarily emphasizing discussion of various topics. Freshman Seminar, on the other hand, was perceived as most emphasizing discussion of a number of topics. These differential perceptions appear to be in accord with the avowed purposes of the two courses.

Students in the two courses had similar perceptions of the objectives of an ideal course. Both groups would like to see discussion of a number of topics as well as an emphasis on learning to think critically. However, they differed from one another in the relative emphases to be placed on each. The Freshman Seminar students perceived an ideal course as one in which there was much emphasis on discussion and less emphasis on learning to think critically. Modes of Inquiry students, on the other hand, perceived an ideal course as one in which there was extensive emphasis on learning, thinking, and ways of knowing, with less emphasis on discussion.

When comparisons were made between the students' perceptions of what their courses had been like and what an ideal course should be like, the data indicated a relatively high degree of relationship between the two for both Modes of Inquiry and Freshman Seminar students. That is, in each course, the students' perceptions of what should be included in an ideal course tended to be similar to what they perceived as having been emphasized in the course that they took. The extent of

HE 000 421

the agreement between the rankings in an ideal course and the course as actually given was higher for Modes of Inquiry than it was for Freshman Seminar, indicating greater satisfaction with the Modes of Inquiry course.

Finally, a relatively high degree of relationship was found in both courses between the rank order of the items on perceived emphasis and the rank order on the extent to which the student was influenced by that particular item. That is, in both Freshman Seminar and Modes of Inquiry, the students said that they were most influenced by those topics that were most extensively discussed in the course. The two courses did not differ significantly on the extent of the relationship. Apparently students are, in general, most influenced by those aspects of a course that are most emphasized. Thus, Modes of Inquiry students were most influenced by both epistemology and discussion, and Freshman Seminar students by discussion. However, Freshman Seminar students were also influenced by ways of knowing even though this was not perceived as being most emphasized in class.

The results from the studies of the Modes of Inquiry course and the Freshman Seminar course indicate that college freshmen in both courses appreciate and are influenced both by discussion and by learning about learning. If both of these are considered important goals for college freshmen, then students should be exposed equally to both of these topics, rather than sacrificing one for the other. Students could take either a one semester or a year course covering both topics. An alternative would be to offer separate courses, one similar to Freshman Seminar and another similar to Modes of Inquiry, giving incoming freshmen the right to choose to take either or both of these courses. A final possibility would be to assign students to one or the other of these courses on the basis of some a priori criterion.

Copies of the full report are available from the Center for the Study of Higher Education.

Introduction

In the fall of 1966 a new course called Modes of Inquiry was offered to incoming freshmen at Hofstra University. The course was designed as an alternative to the Freshman Seminar course that is offered at Hofstra. The students were assigned either to Modes of Inquiry or Freshman Seminar on a more or less random basis. The emphasis in Modes of Inquiry was on ways of knowing and the development of critical thinking in the students. Thus, both the goals of the course and the content of the course were quite different from Freshman Seminar.

Purpose. The present study was designed to obtain three kinds of information about the Modes of Inquiry course: the students' reactions to the course, their perceptions of the objectives of an ideal course of this type, and the extent to which the students perceived their behavior as being altered in any way by the course. A second purpose was to compare these perceptions of the Modes of Inquiry course with the comparable perceptions of the Freshman Seminar course as reported in CSHE Report No. 66.

Procedures. The study made use of a questionnaire that was administered to all of the students in the three sections of Modes of Inquiry. The questionnaire used was the same as that used in assessing reactions to the Freshmen Seminar course, and a complete description can be found in Report No. 66. Completed questionnaires were returned by 57 out of the total of 69 students (83%) enrolled in the three sections of Modes of Inquiry. No attempt was made to analyze instructor reactions since only three instuuctors were involved.

The analysis of the data was based on the relative ranks assigned to the thirty questionnaire items. Most of the discussion will concentrate on the five items that received the highest rankings, and the five that received the lowest rankings. The ranks are based on the percentages of students giving positive ratings. Comparisons were made between the students' perceptions of the ideal objectives of the course and the actual objectives, and between their perceptions of the actual objectives and changes in their behavior, attitude, or thinking. Wherever appropriate, comparisons were also made between Modes of Inquiry and Freshman Seminar.

Students' Perceptions of the Course

The five items that the sutdents perceived as being most emphasized in the Modes of Inquiry course (listed in the first two columns of Table 4) clustered around two dimensions. Three items were related to ways of learning and knowing: learning to think critically, learning to evaluate information, and learning to evaluate ideas of others. The other two items involved discussion of different points of

view and of attitudes and values. The two discussion items were perceived by the students in Freshman Seminar as having been the two most emphasized items. The three learning and knowing items did not appear among the top five in the Freshman Seminar course at all, In Freshman Seminar the remaining three items of the top five included two discussion items and the items referring to the recognition that many students have similar problems. The data also indicated greater unanimity among the Modes of Inquiry students than among the Freshman Seminar students. For the former, 93% to 75% of the students rated the top five items positive whereas for the latter the percentages ranged from 82% to 52%. This may reflect the larger number of counselors teaching the Freshman Seminar courses, many of whom may have different approaches.

The objectives that the <u>smallest</u> percentage of students perceived as having been emphaiszed in Modes of Inquiry were: learning about extra-curricular campus activities, learning to use the library, and individual vocational counseling. The percentage for these three items went from 2% to 7%. The next five items were rated positive by only 9% of the students. These items are: social tranistion from high school to college, learning efficient use of time, developing study habits and techniques, discussion of attitudes towards authority, and disucssion of student's roles in University affairs. (These data are presented in the first two columns of Table 5). Four of these eight items (all of a pragmatic nature) were also ranked among the five lowest by students in Freshman Seminar.

The above data appear to indicate that the Modes of Inquiry course was perceived differently from the Freshman Seminar course. This conclusion is supported by the fact that the correlation (as measured by Kendall's tau) between the rankings of the thirty items by the two groups yielded a value of .39. While this value is significantly different from a zero correlation at the .001 level, it is low in absolute value, and is the lowest of all of the correlations reported in either this, or the previous report. This value of tau can be interpreted to mean that we would be right 70% of the time if we predicted that for a given pair of items a higher rank in the Modes of Inquiry course would be accompanied by a higher rank in the Freshman Seminar course.

Support for this low level of agreement can be gotten from the fact that ten of the thirty items were ranked quite differently by Modes of Inquiry students and Freshman Seminar students. The five items that Modes of Inquiry students rated as much more emphasized in class than Freshman Seminar are: learning to evaluate information, learning to think creatively, discussion of student's responsibility to society, discussion of individual goals, and referral to counseling facilities on campus.

Those items that Modes of Inquiry students rated as much less emphasized in class than Freshman Seminar students are: academic

transition from high school to college, discussion of world problems and national issues, discussion of student's roles in University affairs, social transition from high school to college, and learning about extra-curricular campus activities.

To summarize, the data indicate that the two courses were perceived as being different. Freshman Seminar was perceived as putting emphasis on discussion items, whereas the Modes of Inquiry course was perceived as primarily emphasizing learning, thinking, and ways of knowing, and only secondarily emphasizing discussion items. These perceptions seem to be in accord with the avowed purposes of the two courses.

Student's Perceptions of an Ideal Course

The most important objectives of an ideal Modes of Inquiry course as perceived by the students enrolled in such a course fit into the stated goal of the course--ways of knowing. (Data are in the first two columns of Table 1.) The five highest items were the same as those perceived as most emphasized in the acutal course. They are: learning to think critically, discussion of different points of view, group discussions of attitudes and values, learning to evaluate information, and learning to evaluate ideas of others. These items were rated as positive by 95% to 82% of the students. The first three items mentioned above, learning to think critically and the two discussion items, were also ranked among the five top ideal objectives by students in Freshman Seminar. The two other most important items for the Modes of Inquiry students were related to learning, and for the Freshman Seminar students were related to academic counseling and discussion.

The items least worthy of inclusion in an ideal Modes of Inquiry course according to the students in it are presented in the first two columns of Table 2. These itmes are: learning about extra-curricular campus activities, learning to use the library, discussion of student's roles in University affairs, discussion of the University's responsibility to students, social transition from high school to college, and learning efficient use of time. The three pragmatic items (the first two and the last) were also least important objectives for an ideal Freshman Seminar according to its students.

As a further measure of the relationship between the objectives of an ideal course as seen by Freshman Seminar students and Modes of Inquiry students, a measure of correlation (Kendall's tau) was computed. A value of .48 was obtained which is significantly different from zero at less than the .001 level. This corresponds to 74% correct predictability.

Comparison of specific items not among the highest and lowest ranked items, on which the two groups seemed to differ widely indicated that many more Modes of Inquiry students than Freshman Seminar students would like to have the following included in an ideal course: learning to think creatively, and discussion of the student's responsibility to society. Freshman Seminar students, on the other hand, would prefer discussions of: academic transition from high school to college, the University's responsibility to students, and the student's roles in the University.

In summary, the above data indicate that students in both the Freshman Seminar course and the Modes of Inquiry course would like to see an emphasis on certain types of discussion and an emphasis on learning to think critically in an ideal course. However, the relative emphases on these matters is different in the two courses. In Freshman Seminar an ideal course is perceived as one in which there is a great deal of discussion of many different topics and subsidiary emphasis on critical thinking and academic counseling. In the Modes of Inquiry sections, an ideal course is seen as one in which there is extensive emphasis on learning and ways of knowing with subsidiary emphasis on certain types of discussion. However, both types of objectives were perceived as being important by students in both types of courses.

Comparison Between the Actual Course and an Ideal Course

A comparison between the student's perceptions of an ideal Modes of Inquiry course and the actual course as taught provided an indication of the extent of the students' satisfaction with the course. The degree of agreement between the ideal course and the actual course was relatively high (Kendall's tau equals .80 which is significantly different from no relationship at $<.001$), indicating a definite relationship between the course as given and an ideal course. We would be right 90% of the time if we predicted that for any pair of items included in the analysis the higher ranked ideal item would be the higher ranked actual item. (The complete set of data used for this analysis is in Table 6 in the Appendix.) The tau value for Freshman Seminar students for this same comparison (Report No. 66) was .64, indicating that they were less satisfied than the Modes of Inquiry students.

Table 1 includes the five items that the largest percentage of students in Modes of Inquiry would like to have included in an ideal course in rank order. It also includes the rank for these same items based on the percentage of students perceiving it as actually

Table 1

Highest Ranked Items that "Should Be" Emphasized and the Corresponding Rank on "Was" Emphasized in Modes of Inquiry

Item	Should Be		Was	
	Rank	Per Cent	Rank	Per Cent
Learning to think critically	1.5	95	1	93
Discussion of different points of view	1.5	95	2	91
Group discussion of attitudes and values	3.5	89	5	75
Learning to evaluate information	3.5	89	3	82
Learning to evaluate ideas of others	5	82	4	81

emphasized. There is complete agreement on the top five items; those that should be most emphasized were actually most emphasized.

In Table 2 are listed the six items (since there were tied ranks) that the smallest percentage of students perceived as ideal

Table 2

Lowest Ranked Items that "Should Be" Emphasized and the Corresponding Rank on "Was" Emphasized in Modes of Inquiry

Item	Should Be		Was	
	Rank	Per Cent	Rank	Per Cent
Learning about extra-curricular campus activities	30	7	30	2
Learning to use the library	29	9	29	5
Discussion of student's roles in University affairs	27.5	16	25	9
Discussion of University's responsibility to students	27.5	16	20	16
Social transition from high school to college	25.5	19	25	9
Learning efficient use of time	25.5	19	25	9

objectives for a Modes of Inquiry course. The rank for each item on actually emphasized is also presented. Five of the six are among the lowest ranked items on both lists. The University's responsibility to students was more discussed than the students ideally preferred.

Two items, not among the highest or lowest ranked, were less discussed than the students preferred: world problems and national issues, and attitudes towards authority.

Students' Perceptions of Changes in Behavior, Attitude, or Thinking

Because of the importance of perceived influence in evaluating the Modes of Inquiry course, the percentage of students indicating change in behavior, attitude, or thinking to all thirty items on the questionnaire and the rank of these percentages are presented in rank order in table 3. Of the five items ranked highest by the Modes of Inquiry students three reflect ways of knowing and two are discussion items. All five items were also most emphasized in the course. Four of these same items were also perceived as most influential by Freshman Seminar students (two ways of knowing items and two discussion items). The two additional items that were percieved as most influential by Freshman Seminar students were recognition that many students have similar problems and discussion of individual freedom and indipendence. The ways of knowing items were not among the five most emphasized in Freshman Seminar although the other four items were.

Of the five lowest ranked items, at the bottom of Table 3, the three lowest reflect a pragmatic dimension and the other two are discussion of world problems and national issues and discussion of students'roles in University affairs. For the Freshman Seminar students all five lowest ranked items were pragmatic in nature.

The overall degree of association is relatively low; Kendall's tau equals .49 (significantly different from zero at $<.001$ level). The items that the Modes of Inquiry students perceived as much more influential than the Freshman Seminar students were: learning to evaluate information, learning to think creatively, and discussion of individual goals. The items that they perceived as less influential were: recognition that many students have similar problems, social transition from high school to college, discussion of world problems and national issues, and discussion of students' roles in Unviersity affairs.

Table 3

Percentage of Students Perceiving a Change in their Behavior on Each Item and the Rank Order of these Percentages

Item No.	Item	Influenced Rank	%
17	Discussion of differnet points of view	1	91
10	Learning to evaluate information	2	89
2	Learning to think critically	3	88
16	Learning to evaluate ideas of others	4	86
1	Group discussions of attitudes and values	5	79
28	Learning to think creatively	6	77
23	Understanding interpersonal relations	7	67
21	Learning to verbalize ideas	8	65
30	Discussion of individual freedom and independence	9	54
18	Understanding the purposes of higher education	10	51
20	Discussion of the student's responsibility to society	11	49
22	Discussion of individual goals	12	42
11	Individual academic counseling	13.5	38
3	Help in personal problems	13.5	38
5	Recognition that many students have similar problems	15.5	37
19	Individual personal counseling	15.5	37
7	Discussion of attitudes towards authority	17.5	33
25	Discussion of attitudes towards friends and family	17.5	33
9	Academic transition from high school to college	19	32
13	Disucssion of new experiences	20	30
29	Referral to counseling facilities on campus	21	28
8	Developing study habits and techniques	22	26
12	Learning efficient use of time	24	21
15	Discussion of the University's responsibility to students	24	21
14	Social transition from high school to college	24	21
4	Discussion of world problems and national issues	26	19
6	Discussion of student's roles in University affairs	27	18
27	Individual vocational counseling	28	14
26	Learning about extra-curricular campus activities	29	9
24	Learning to use the library	30	7

Relationship Between Influence on Students and Students' Perceptions of Content

Since education and learning involve change, one good evaluative measure of a course is the relationship between course content and change in students' behavior, attitude, or thinking.

The degree of association between the rank order of the items on perceived emphasis and the rank order of the items on perceived influence is relatively high (Kendall's tau equals .84 which is significantly different from zero at $< .001$). We would be right 92% of the time if we predicted for any pair of items in the analysis that the item that was perceived as being more emphasized was also perceived as being more influential. The complete data for this analysis are in Table 6 in the Appendix. (As presented in Report No. 66, the degree of association for Freshman Seminar between perceived emphasis and perceived influence was .79.) While we cannot infer causal relationships, the data do indicate that the items that the students perceived as most influential tended to be the same as those perceived as being emphasized. These results are corroborated by the data in Tables 4 and 5.

From Table 4 it can be seen that the five highest ranked items on perceived emphasis are also the five highest ranked items on perceived influence.

Table 4

Highest Ranked Items that "Was" Emphasized and the Corresponding Rank on "Influenced" in Modes of Inquiry

Item	Was		Influenced	
	Rank	Per cent	Rank	Per cent
Learning to think critically	1	93	3	88
Discussion of different points of view	2	91	1	91
Learning to evaluate information	3	82	2	89
Learning to evaluate ideas of others	4	81	4	86
Group discussion of attitudes and values	5	75	5	79

Table 5 presents the items perceived as least emphasized and the corresponding rank on "influenced." There are eight items listed

Table 5

Lowest Ranked Items that "Was" Emphasized and the Corresponding Rank on 'Influenced' in Modes of Inquiry

Item	Was		Influenced	
	Rank	Per cent	Rank	Per cent
Learning about extra-curricular campus activities	30	2	29	9
Learning to use the library	29	5	30	7
Individual vocational counseling	28	7	28	14
Social transition from high school to college	25	9	24	21
Learning efficient use of time	25	9	24	21
Developing study habits and techniques	25	9	22	26
Discussion of attitudes towards authority	25	9	17.5	33
Discussion of students' roles in University affairs	25	9	27	18

because there was a tied rank on five of the items. Ranks for seven of the eight items correspond very closely. Only on the item discussion of attitudes towards authority was there a discrepancy with it being perceived as more influential than emphasized.

APPENDIX

Table 6

Rank Order of Percentages Giving Positive Ratings (Ratings of 1 and 2 for "Should Be" and "Was" and 1 Check and 2 Checks for "Influenced")

Item No.	Item	Should Be	Was	Influenced
1	Group discussion of attitudes and values	3.5	5	5
2	Learning to think critically	1.5	1	3
3	Help in personal problems	14.5	18	13.5
4	Discussion of world problems and national issues	12	20	26
5	Recognition that many students have similar problems	14.5	13	15.5
6	Discussion of student's roles in University affairs	27.5	25	27
7	Discussion of attitudes towards authority	16.5	25	17.5
8	Developing study habits and techniques	23	25	22
9	Academic transition from high school to college	20	16.5	19
10	Learning to evaluate information	3.5	3	2
11	Individual academic counseling	11	14.5	13.5
12	Learning efficient use of time	25.5	25	24
13	Discussion of new experiences	24	22	20
14	Social transition from high school to college	25.5	25	24
15	Discussion of the University's responsibility to students	27.5	20	24
16	Learning to evaluate ideas of others	5	4	4
17	Discussion of different points of view	1.5	2	1
18	Understanding the purposes of higher education	13	11	10
19	Individual personal counseling	16.5	16.5	15.5
20	Discussion of the student's responsibility to society	9	8	11
21	Learning to verbalize ideas	7.5	6	8
22	Discussion of individual goals	18.5	12	12
23	Understanding interpersonal relations	10	8	7
24	Learning to use the library	29	29	30
25	Discussion of attitudes towards friends and family	21	20	17.5
26	Learning about extra-curricular campus activities	30	30	29
27	Individual vocational counseling	22	28	28
28	Learning to think creatively	6	8	6
29	Referral to counseling facilities on campus	18.5	14.5	21
30	Discussion of individual freedom and independence	7.5	10	9

Table 7

Percentages of Students in Modes of Inquiry Giving Positive Ratings (Ratings of 1 and 2 for "Should Be" and "Was" and 1 Check and 2 Checks for "Influenced")

Item No.	Item	Should Be	Was	Influenced
1	Group discussions of attitudes and values	89	75	79
2	Learning to think critically	95	93	88
3	Help in personal problems	38	19	38
4	Discussion of world problems and national issues	46	16	19
5	Recognition that many students have similar problems	38	26	37
6	Discussion of student's roles in University affairs	16	9	18
7	Discussion of attitudes towards authority	37	9	33
8	Developing study habits and techniques	24	9	26
9	Academic transition from high school to college	33	23	32
10	Learning to evaluate information	89	82	89
11	Individual academic counseling	49	24	38
12	Learning efficient use of time	19	9	21
13	Discussion of new experiences	23	12	30
14	Social transition from high school to college	19	9	21
15	Discussion of the University's responsibility to students	16	16	21
16	Learning to evaluate ideas of others	82	81	86
17	Discussion of different points of view	95	91	91
18	Understanding the purposes of higher education	44	37	51
19	Individual personal counseling	37	23	37
20	Discussion of the student's responsibility to society	60	47	49
21	Learning to verbalize ideas	65	54	65
22	Discussion of individual goals	35	28	42
23	Understanding interpersonal relations	58	47	67
24	Learning to use the library	9	5	7
25	Discussion of attitudes towards friends and family	30	16	33
26	Learning about extra-curricular campus activities	7	2	9
27	Individual vocational counseling	26	7	14
28	Learning to think creatively	70	47	77
29	Referral to counseling facilities on campus	35	24	28
30	Discussion of individual freedom and independence	65	42	54